Int. J. Pres. Ves. & Piping **55** (1993) 511–513

CONTENTS OF VOLUME 55

Number 1

Special Issue: Structural Integrity of Pressure Vessels and Piping—The Finnish Perspective

Guest Editorial 1

Overview of the Nuclear Power Plant Structural Integrity Research in Finland . 3
K. TÖRRÖNEN, P. AALTONEN, H. HÄNNINEN, K. MÄKELÄ, P. KARJALAINEN-ROIKONEN, H. KEINÄNEN, P. KAUPPINEN, R. RINTAMAA, H. TALJA, K. WALLIN & M. VALO (Finland)

Irradiation Damage Effects on the Fracture Toughness Transition Curve Shape for Reactor Pressure Vessel Steels 61
K. WALLIN (Finland)

Comparison of Charpy-V and *J*-Integral Transition Temperature Shifts in CrMoV Pressure Vessel Steels 81
M. VALO, K. WALLIN, K. TÖRRÖNEN & R. AHLSTRAND (Finland)

Application of the Advanced Instrumented Impact Testing Facility for the Irradiation Damage Assessment 89
R. RINTAMAA, M. NEVALAINEN & M. VALO (Finland)

Nordic Numerical Round Robin for a Side-Grooved CT-specimen 107
H. TALJA (Finland)

Effect of Cladding Residual Stresses on *J*-Integrals in a Pressure Vessel 125
P. RAJAMÄKI (Finland)

Ultrasonic Sizing of Defects in the Austenitic Cladding of Reactor Pressure Vessels 141
P. KAUPPINEN & P. SÄRKINIEMI (Finland)

The Correlation of IGSCC Propagation with the Power Plant Transient History . 149
P. AALTONEN, K. SAARINEN & K. SIMOLA (Finland)

On-Line Monitoring for Further Corrosion Reduction and Better Understanding of the Activity Build-Up in LWR Primary Coolant Systems 163
K. MÄKELÄ & P. AALTONEN (Finland)

Announcements 179

Int. J. Pres. Ves. & Piping **(55)** (1993)—© 1993 Elsevier Science Publishers Ltd, England. Printed in Northern Ireland

Number 2

Special Issue: Materials Testing

Guest Editorial 181

On-Line Fracture Mechanics Assessment of the Safety of Structures Based on Ultrasonic Testing 183
R. MOSER, E. T. TILL & F. KRENMAYR (Austria)

Material Testing and Evaluation from the Point of View of the Nuclear Power Plant Safety 187
P. TRAMPUS (Hungary)

A Closer Look at Estimation of Fracture Toughness from Charpy V-Notch Tests 203
H. J. SCHINDLER & U. MORF (Switzerland)

Evaluation of J_{Ic} for Weldment Constituents by Multispecimen Test Method . . 213
I. GLAVARDANOV & S. SEDMAK (Yugoslavia)

On the Assessment of Dynamic Fracture Characteristics of Weld Metal 223
Q. LIU & T. VARGA (Austria)

Measurement of Dynamic Elastic–Plastic Fracture Toughness Parameters using Various Methods 233
H.-W. VIEHRIG, K. POPP (Germany) & R. RINTAMAA (Finland)

Influence of Microstructure and Non-metallic Inclusions on Sulphide Stress Corrosion Cracking in Low-Alloy Steels 243
V. I. ASTAFJEV, S. V. ARTAMOSHKIN & T. V. TETJUEVA (Russia)

The Role of Microstructure in the Propagation of Ultrasound in Bainitic Low-Alloy Steels 251
F. BERGNER, B. KÖHLER & K. POPP (Germany)

Effect of Reliability of Crack Propagation Measurement on the Assessment of Life-Times for Structural Elements Having Flaws 261
J. LUKÁCS (Hungary)

Reproducibility of Measuring the Crack Propagation with a Clip Gauge 269
GY. NAGY & J. LUKÁCS (Hungary)

The Shape of Surface Cracks in Fatigue 275
J. C. RADON (UK)

Acoustic Emission Monitoring of Pressure Vessels 287
P. PELLIONISZ & P. SZÜCS (Hungary)

Evaluation Method of Dynamic Fracture Toughness by the Computer-Aided Instrumented Charpy Impact Testing System 295
I. YAMAMOTO & T. KOBAYASHI (Japan)

Problems Related to Safety and Reliability of Materials in Environments Polluted by Hydrogen Sulphide 313
G. CASARINI (Italy)

Creep Damage and Creep Crack Growth in Low-Alloyed Heat-Resisting Steels . 323
D. REGENER (Germany)

A Methodology for Modelling Tertiary Creep Behaviour of Engineering Alloys under Oxidising Conditions 333
S. OSGERBY & B. F. DYSON (UK)

J–R Curve Dependence on Specimen Geometry and Microstructure in Two Austenitic–Ferritic Stainless Steels 343
R. ROBERTI, W. NICODEMI, G. M. LA VECCHIA (Italy) & SH. BASHA (Albania)

Influence of Microstructure on Micromechanisms of Failure in HSLA Steels . . 353
L. PARILÁK & J. DOJČÁK (Slovak Republic)

Number 3

Combination of Radiation and Hydrogen Damage of Reactor Pressure Vessel Materials 361
K. ŠPLÍCHAL, M. RUŠČÁK & J. ŽD'ÁREK (Czechoslovakia)

High Cycle Fatigue Strength of Butt Welded Joints of Small Diameter Pipes . . 375
K. KISHIDA, M. HIGUCHI & M. FUKUZAWA (Japan)

The Application of the Twelve-Angled Polygonal Yield Criterion to Pressure Vessel Problems 385
Z. XIAOYING, L. JINXIANG, L. JINWEI, L. GANGLING, Y. ZHICHAO & L. JINYU (China)

Numerical Analysis of IPIRG Cracked Pipe Experiments Subjected to Dynamic and Cyclic Loading 395
B. BRICKSTAD (Sweden)

Pressure Vessel Manufacturing: Mechanical Analysis of Gas Bottles with Convex End-Plates 423
M. NICOLICH (Italy)

Elastic Analysis of a Circular Flange Joint Subjected to Axial Force 435
J. CAO (China) & A. J. BELL (UK)

Thickness Changes in Pressurised Shells 451
L. A. GODOY & F. G. FLORES (Argentina)

Materials Data for High-Temperature Design of Ferritic Steel Pressure Vessel Weldments 461
Z. P. WANG & D. R. HAYHURST (UK)

Nonlinear Static Behaviour of Shallow Spherical Shell on a Kerr Foundation . . 481
D. N. PALIWAL & R. SRIVASTAVA (India)

On Dynamic Crack Propagation—A Literature Study 495
M. M. BANERJEE, J. N. DAS & S. SIKDAR (India)